



Peoria Fire Department



Plan Review Guide for Fire Sprinkler Systems

This Plan Review Guide is designed as a baseline contents checklist prior to a detailed fire plan review for the City of Peoria ONLY. It is subject to changes at any time. Fire sprinkler plan submittals shall be in accordance with the standard plan submittal as provided by the Arizona Automatic Alarm Association. It is designer's responsibility to design the systems complying with the related codes and standards.

The following items shall be included on the submittals.

GENERAL INFORMATION ABOUT THE PROJECT

1. _____ One copy of Fire Protection Contractor's Business Permit (Issued by Peoria Fire Department).
2. _____ One copy of approved engineering design document.
3. _____ Indicate this is a new system/an existing system
4. _____ Indicate the design Standard, such as NFPA 13, 13R or 13D or others.
5. _____ Square footage of the project
6. _____ Construction type of the building
7. _____ Occupancy hazard classification
8. _____ Special occupancy, such as flammable/combustible liquids, aircraft hanger, oxidizers, etc
9. _____ Storage height exceeding 12 feet
10. _____ Commodity classification if this is a storage occupancy

GENERAL PLANS INFORMATION

1. _____ Name of owner or occupant
2. _____ Name, address and license number(s) of contractor
3. _____ Location, including correct street address
4. _____ Date of plans (Note: Each revision should be dated)
5. _____ Point of compass
6. _____ Full height cross section
7. _____ Ceiling construction, structure member information
8. _____ Location of partitions
9. _____ Location of fire walls
10. _____ Occupancy class/usage of each area or room
11. _____ Location and size of concealed spaces, closets, attics and bathrooms
12. _____ Small enclosures in which NO sprinkler are to be installed
13. _____ The scale on all plans including reference key
14. _____ A legend list with descriptions. (Use of NFPA 170 symbols is recommended.)

WATER SUPPLY INFORMATION

1. _____ Water flow test location and date (less than six months)
2. _____ Static pressure, residual pressure and flow in GPM
3. _____ Flow test conducted by contact or information supplied by
4. _____ Size of main
5. _____ System elevation relative to flow test hydrant

Private Fire Service Mains

6. _____ Size, length, weights and location of main
7. _____ Pipe and fitting material
8. _____ Pointe of connection to city main
9. _____ Size, type and location of valves
10. _____ Size, type and location of valves indicators
11. _____ Size, type and location of backflow prevention devices
12. _____ Size, type and location of regulators
13. _____ Size, type and location of meters
14. _____ Size, type and location of valves pits
15. _____ Size and location of all thrust blocks

Fire Pump

16. _____ Type of fire pump
17. _____ Indicate capacity
18. _____ Pump data provided

Water Tank

19. _____ Material of water tank
20. _____ Capacity verification (duration, required flow and total capacity)

SPRINKLER SYSTEM DESIGN

1. _____ Indicate the type of the system
2. _____ System design by schedule
3. _____ Number of sprinklers on each riser per floor if design by schedule
4. _____ System design hydraulically
5. _____ Hydraulic data nameplate if design hydraulically
6. _____ Total area protected by each system on each floor
7. _____ Sprinkler spacing applied in the system
8. _____ Detail of size, location and arrangement of all auxiliary drain connections
9. _____ Where equipment is to be installed as an addition to an existing system, enough detail of the existing system indicated to make all conditions clear
10. _____ Size, location, thread type and piping arrangement of fire department connection
11. _____ Size, location and arrangement of inspectors test connection
12. _____ Location of main drain connection

Dry pipe, pre-action, or deluge system

13. _____ Total number of sprinklers on each dry pipe, pre-action, combined dry pipe, pre-action, or deluge system
14. _____ Approximate capacity of each dry pipe system
15. _____ Pitch pipe to drain for dry pipe, pre-action, or deluge system
16. _____ Size and capacity for air compressor where provided

SPRINKLER SYSTEM COMPONENTS

1. _____ Product data is included
2. _____ Make, type, model, nominal K-factor of sprinklers, and sprinkler ID number
3. _____ Temperature rating and location of high-temperature sprinklers
4. _____ Pipe type and schedule of wall thickness
5. _____ Nominal pipe size and cutting lengths of pipe
6. _____ Location and size of riser nipples
7. _____ Type of fittings and joints
8. _____ Type and location of hangers, sleeves, braces and method of securing sprinkler
9. _____ Size and location of standpipes and hose connection detail
10. _____ Pressure-reducing valves detail
11. _____ Manufacturer, size, type of backflow prevention device
12. _____ The placement, location and contents of the spare sprinkler head cabinet

HYDRAULIC CALCULATION/SPECIFICATION

1. _____ Design area
2. _____ Room design method
3. _____ Minimum water application density
4. _____ Coverage area per sprinkler
5. _____ C value of pipe
6. _____ Most demanding area is calculated
7. _____ Number of sprinklers in design area
8. _____ Total water requirement as calculated, including allowance for hose stream and in-rack sprinkler
9. _____ Hydraulic reference points shown on the plan that correspond with comparable reference points on the hydraulic calculation sheets
10. _____ Pipe sizes and lengths shown on the plan that correspond with comparable reference points on the hydraulic calculation sheets
11. _____ Total quantity of water and pressure required noted at a common reference point for each system
12. _____ Relative elevations of sprinklers, junction points, and reference points
13. _____ Pressure loss for backflow prevention device, meter and/or other devices included in hydraulic calculations

ALARM

1. _____ Type and location of alarm bells
2. _____ Fire alarm system connection
3. _____ Type and location of water flow switches
4. _____ Type and location of tamper switches